

## 1923 COLLECTION AND LIFE HISTORY NOTES ON STRATEGUS MORMON

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The writer has collected *Strategus mormon* Burm. for many seasons, in the Sandhill pasture region southwest and southeast of Medora, Reno County, Kansas, adjacent to the valley of Little River. The first season only two specimens were taken, but it was a season or two later before the species was recognized and was found to be in but few collections in the world. This knowledge made it desirable to collect, but success was variable. Some seasons none were found. Other seasons a half dozen or a dozen might be taken, but never enough to supply the demand. The season of 1922 yielded the most specimens up to that time, but 1923 was the record collecting season for this species. The first specimens were found about May 15, and the last ones were taken about July 6.

This past season, however, started abnormally early. A male specimen was picked up by a friend, Mr. Kenneth Krehbiel, about 18 miles south of McPherson, on April 8. No more were seen however until more than five weeks later when they began to appear in the horse and cattle pastures near Medora. Always the first specimens found were males. Careful observation the past season revealed that of the first thirty specimens taken in May, only 5 were females. After the tenth of June, the females increased rapidly, and by the twentieth of June the sexes were approximately equal.

My conclusion, after examining many burrows, is that the male appears from 5 to 15 days before the female. He selects the place for a burrow, choosing preferably a horse dropping from six months to a year old—nothing recent is attractive. He forces his way with his powerful head and fore legs into the sand or soil close beside or under the dropping, burrowing to a depth of from 4 to 12 inches according to the location and quality of the sand or soil. He does not throw the sand to the surface, but

packs it or crowds it outward from his body, until the hole is sufficiently large. At the bottom an enlargement is made, sufficient to contain the food, consisting of shredded horse or cow droppings, that is taken down the burrow by the female when she finds a mate who has built the house for the family. After the food for the future family is stored in the bottom chamber, and several eggs, between a sixteenth and an eighth of an inch in length, and a little more than a sixteenth of an inch in diameter have been deposited in the food mass, they either drive other burrows, and stock them, or move to a new location and set up another home.

Almost always in May and the first 10 days in June one male is found in the burrow. After that a female, and a male, and occasionally a female and two males, and rarely two pairs, may be found at the same location, but always two burrows are occupied. By the first week in July only an occasional female is found alive in the burrow and after that time, remains of dead *Strategus* show that the season is over. *Strategus mormon* is a day flier, his flight being somewhat slow and noisy. I have taken none at night, although many species of *Scarabeidæ* are exclusive night flyers. The season of 1923 yielded more specimens of *Strategus* in three or four pastures adjacent to Medora than had been taken in all the seasons previously.